MONITOR WELL PRE-SPUD PROPOSAL

1) WELL NAME/NUMBER: ST-3-DD

2) PROPOSED LOCATION: (a) General (on or off-site) Off-site

(attach map) Site Area State Land Section

(b) Sect 32 Twnshp 20S Rng 3E SE ¼ SE ¼ SE ¼ NW ¼

3) WELL PARAMETERS:

(a) Est. total depth 800 (ft) (b) Est. ground elevation 4496 ft

(c) Anticipated stratigraphy:

Alluvium (Santa Fe Group) from 0 ' to 750 ' (depth)

Bedrock (Tuff) from 750 ' to TD ' (depth)

(d) Anticipated water bearing horizon(s):

Alluvium (Santa Fe Group) at 465 ' (depth)

Bedrock (Tuff) at 750 ' (depth)

(e) Anticipated static water level 426 ' (depth)

4) WELL PURPOSE/JUSTIFICATION (attach maps and table if needed):

To assess groundwater quality at or below the alluvium/bedrock contact. This information is needed to construct a vertical groundwater profile at this location.

5) PROPOSED DRILLING PARAMETERS:

(a) Drilling method(s): (air/foam/mud rotary/auger/etc.)

Mud rotary (to set surface casing) from 0 ' to 60 ' (depth)

Air foam rotary 7 7/8" pilot hole from 60 ' to TD ' (depth)

Ream to 12 1/4" borehole with mud rotary from 60 ' to TD ' (depth)

Air-foam method: "Quik-Foam" surfactant/water mixture used in conjunction with filtered compressed air.

Mud-rotary method: Bentonite mud/water mixture.

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(b) Lithology sampling - collect sample every:

5' intervals Method Grab from 0 ' to TD ' (depth)
Core type 6" Dennison from ' to ' (depth)
2" Christiansen from ' to ' (depth)

(c) Anticipated drilling additive(s): EZ mud

7) PROPOSED WELL COMPLETION DESIGN/MATERIALS

(a)

Casing:	Material	Diameter	From	To	Comments
Temporary					
Surface		10"	0	100' max	
Screen (10')	Stainless ++	4"	**		0.02"

Completion Pipe stainless + 4" 0 TD *

Standard material: Blank riser, silt trap, locking cap

N/A Data not available at this time
* for deep completions (450 feet or more)
** to be determined from geophysical logs
\+ Type 304, Schedule 5 stainless steel
Type 304, Schedule 10 stainless steel
++ Regular strength screen, extra strength screen used below 450 feet

(b) Filter pack: Standard 8/20 and 16/40 sand and bentonite plug(s), grout to surface.

8) PROPOSED WELL DEVELOPMENT

(a) Surge and bail with surge block and bailer.

(b) Pump with submersible pump until parameters stabilize.

9) WELL AUTHORIZATION

(a) Proposed by Geoscience Consultants, Ltd.

(b) Authorized William E. Waldrip (name) NASA (representing) W E Waldrip (signature)

NASA-WSTF WELL LOCATIONS